Oribatids from Madagascar IV (Acari: Oribatida)

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Oribatids from Madagascar IV (Acari: Oribatida). - Oribatida material collected in Madagascar by a scientist of the Muséum d'histoire naturelle, Genève was studied. Twenty species are listed, six of them are new to science: Mesoplophora (P.) madegassica, Masthermannia hauseri, Caverenulus foliaceus, C. salicinus, Ambrobates translamellatus and Vilhenabates ambohitra. The new genus Ambrobates gen. n. is established in the family Scheloribatidae. Taxonomical notes on rare or little known species and a key for identification of Caverenulus species are given.

Keywords: New taxa - list of identified species - taxonomical and zoogeographical notes - key - Malagasy Republic.

INTRODUCTION

The special and peculiar fauna of Madagascar is nowadays quite well known, however, the soil mesofauna, characterised by species with minute size and unspectacular life style, and especially the mites are an exception. Research on them has been carried out with high intensity recently (Mahunka 2002), and lately Dr Csaba Csuzdi, a well-known expert of earthworms, collected soil samples there in 2008 (Mahunka 2009).

Earlier, at the end of the 20th century, the soil fauna of Madagascar was systematically studied by Swiss taxonomists (Dr Bernd Hauser and Dr Charles Lienhardt of the Muséum d'histoire naturelle, Genève) and Hungarian (the associate co-workers of the Hungarian Natural History Museum, Dr Dénes Balázs and Dr Tamás Pócs) scientists. Due to these exploratory activities, the oribatid fauna of Madagascar, the former Malagasy Republic, is now quite well known. However, some regions of the island and the taxa expected to be found there - which constitute the majority of oribatids - are still considerably less well known and hence severe gaps in our knowledge exist.

In this paper I continue my study of the material collected by researchers of the Muséum d'histoire naturelle, Genève (Mahunka 1993, 1994, 1997), publish the results of my taxonomic investigation and give further notes on the geographic distribution of oribatid species. Hereunder I list twenty species, six of which are new to science. Six

species are for the first time indicated in the Madagascan fauna: *Epilohmannia pallida* Wallwork, 1962, *Hoplophorella vitrina* (Berlese, 1913), *Hoplophora hamata* (Ewing, 1909), *Tectocepheus velatus velatus* (Michael, 1880), *Ramusella clavipectinata* (Michael, 1885) and *Berlesezetes africanus* (Balogh,1958). I give notes on the Madagascan specimens of two species.

MATERIAL AND METHODS

As in my earlier papers, I follow the system of Marshall *et al.* (1987), based on that of Grandjean (1954, 1965), with some modifications introduced by Woas (2002), Weigmann (2006) and Subías (2004, 2008). In the descriptions the morphological terminology of Grandjean (in several publications) was used with some modifications concerning the studied groups or organs (e.g. Mahunka & Zombori, 1985; Norton *et al.*, 1997; Mahunka & Mahunka-Papp, 2001; Niedbała, 2001, 2004) and the above mentioned publications).

All material examined is deposited in the Muséum d'histoire naturelle de Genève (MHNG) and in the Hungarian Natural History Museum, Budapest (HNHM).

LIST OF COLLECTING SITES

Mad-89/8: Madagascar (Prov. Antsiranana [anciennement Diego-Suarez], Sous-préf. Antsiranana): Parc National "Montagne d'Ambre" (=Ambohitra), au début du chemin vers la "Petit Cascade", après la pénière, forêt primaire, prélèvement de sol dans les angles formés par les contreforts d'un grand arbre vivant et d'un grand arbre mort, 980 m; 23.XI.1989, leg. B. Hauser.

Mad-89/29: Madagascar (Prov. Antsiranana [anciennement Diego-Suarez], Sous-préf. Andonay [anciennement Hell-Ville]): île Nosy Be, Réserve naturelle intégrale "Lokobe", forêt primaire près d'Ampasindava, prélèvement de sol dans les angles formés par les contreforts d'un grand arbre, 14 m; 28.XI.1989, leg. B. Hauser.

Mad-89/45: Madagascar (Prov. Toliara [Tulear], Sous-préf. Tôlenaro [Fort-Dauphin]): 73 km de Tôlenaro route vers Amboasary, plantation de sisal, prélèvement de sol au pied d'un baobab mort, env. 100 m; 4.XII.1989, leg. B. Hauser (extraction Berlese à Genève).

LIST OF STUDIED SPECIES

EPILOHMANNIIDAE Oudemans, 1923 Epilohmannia pallida Wallwork, 1962

Locality: Mad-89/8. First record for Madagascar.

Mesoplophoridae Ewing, 1917

Mesoplophora (Parplophora) madegassica sp. n.

EUPHTHIRACARIDAE Jacot, 1930

Microtritia tropica Märkel, 1964

Locality: Mad-89/8.

STEGANACARIDAE Niedbała, 1986

Hoplophorella vitrina (Berlese, 1913)

Locality: Mad-89/29. First record for Madagascar.

Hoplophora hamata (Ewing, 1909)

Locality: Mad-89/45. First record for Madagascar.

NANHERMANNIIDAE Sellnick, 1928

Masthermannia hauseri sp. n.

Nanhermannia milloti Balogh, 1960

Locality: Mad-89/8.

ZETORCHESTIDAE Michael, 1898

Zetorchestes (Phyllorchestes) phylligerus Mahunka, 1983

Locality: Mad-89/8.

EREMULIDAE Grandjean, 1965

Caveremulus foliaceus sp. n.

Caveremulus cordisetus Mahunka, 1983

Locality: Mad-89/29.

Caverenulus salicinus sp. n.

TECTOCEPHEIDAE Grandjean, 1954

Tectocepheus velatus (Michael, 1880)

Locality: Mad-89/8. First record for Madagascar.

OPPIIDAE Sellnick, 1937

Ramusella (Ramusella) clavipectinata (Michael, 1885)

Locality: Mad-89/8. First record for Madagascar.

Ramusella (Insculptoppia) aepyornis Mahunka, 1994

Locality: Mad-89/45.

Oppiella nova (Oudemans, 1902)

Locality: Mad-89/8.

Fossoppia calcarata Mahunka, 1994

Locality: Mad-89/8.

MICROZETIDAE Grandjean, 1936

Acaroceras (Malgoceras) helleri Mahunka,1993

Locality: Mad-89/29.

Berlesezetes africanus (Balogh, 1958)

Locality: Mad-89/8. First record for Madagascar.

SCHELORIBATIDAE Grandjean, 1933

Ambrobates translamellatus gen. n., sp. n.

HAPLOZETIDAE Grandjean, 1936

Vilhenabates ambohitra sp. n.

DESCRIPTIONS AND REMARKS

Hoplophorella hamata (Ewing, 1909)

REMARKS: Judging from my study of types, the new specimens collected appear clearly conspecific with *H. schauenbergi* Mahunka, 1978 and *H. ligulifera* Mahunka, 1987, which were treated by Niedbała (2001) as synonyms of *H. hamata*. *H. ligulifera* and *H. schauenbergi* were described from the Ethiopian region, *H. hamata* from the USA.

The main characteristics of this species are: a slightly dilated, lanceolate lamellar seta and spiniform interlamellar setae, notogastral ornamentation consisting of finely punctulate small foveolae, and the long peduncle of the median adamal setae (ad_2) .

Mesoplophora (Parplophora) madegassica sp. n.

Figs 1-4

MATERIAL EXAMINED: Holotype: Madagascar, Prov. Antsiranana; 23.XI.1989; leg. B. Hauser (Mad-89/8); 3 paratypes from the same sample. Holotype and 2 paratypes deposited in MHNG, 1 paratype (1785-PO-2009) in HNHM.

DIAGNOSIS: Rostrum triangular, apex pointed. Rostral and lamellar setae setiform, ciliate, interlamellar setae filiform, smooth. Sensillus long, head small, dilate. Among the notogastral setae c_3 shorter and thinner than others. Latter setae finely ciliate. Eight pairs of ventral setae, one pair of them very long. Seven (5+2) pairs of genital, three pairs of anal setae present, all finely ciliate.

MEASUREMENTS: Length of aspis 196-216 μ m, height of aspis 148-152 μ m, length of notogaster 270-286 μ m, height of notogaster 182-197 μ m.

DESCRIPTION: *Prodorsum*: Rostral apex sharply pointed. Prodorsal surface distinctly punctulate. Prodorsal setae of different lengths and sizes, rostral and lamellar setae much thicker than interlamellar and exobothridial setae, rostral and lamellar setae well ciliate, setiform, interlamellar setae very thin, filiform, smooth, exobothridial setae also smooth and filiform, the latter shortest of all, but longer than the diameter of the cup-shaped bothridium. Peduncle of sensillus conspicuously long, head small, lanceolate, with irregular velum and some small cilia.

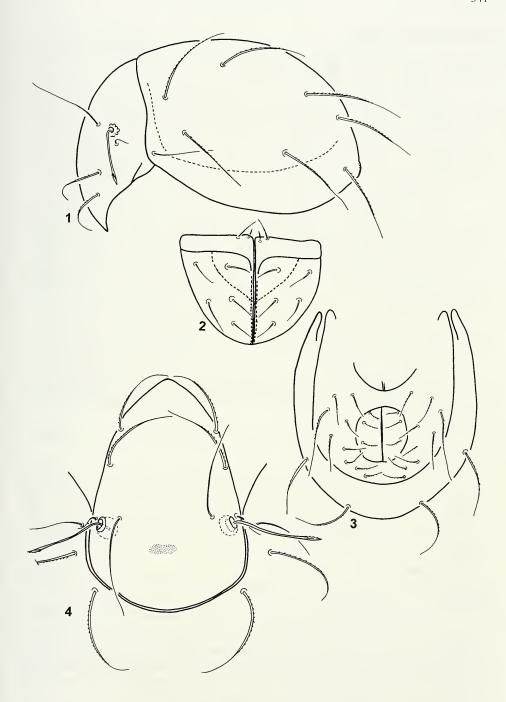
Notogaster: With eight pairs of long setae, one (setae c_3) much shorter and slightly thinner than others, smooth. Remaining setae with small cilia or spines, nearly equal in length. Setae c_1 and c_2 arising far from notogastral border, setae c_3 located very close to this border.

Ventral parts: Genital plates with seven (5+2) pairs of simple setae, all setiform and smooth. Anal plates with three pairs of thinner but longer setae, finely roughened. Nine pairs of thin ventral setae of different lengths, all slightly ciliate. Lateral setae longest of all.

Legs: Typical for the genus.

REMARKS: On the basis of the number of anal setae, the new species belongs to the subgenus *Parplophora* Niedbała, 1985. The new species is well characterised by the striking shape of the sensillus, which was previously unknown for *Mesoplophora* taxa from the Ethiopian Region (Niedbała 1985).

ETYMOLOGY: Named after its country of origin.



Figs 1-4

Mesoplophora (Parplophora) madegassica sp. n. (1) Body in lateral view. (2) Genital plates. (3) Ventral parts. (4) Aspis in dorsal view.

Masthermannia hauseri sp. n.

Figs 5-7

MATERIAL EXAMINED: Holotype: Madagascar, Prov. Antsiranana; 3.XI.1989; leg. B. Hauser (Mad-89/8); 2 paratypes from the same sample. Holotype and 1 paratype deposited in MHNG, 1 paratype (1786-PO-2009) in HNHM.

DIAGNOSIS: *Rostrum* rounded. Postbothridial condyles situated near to each other. Rostral setae dilated, lamellar and interlamellar setae T-shaped, exobothridial setae filiform. Sensillus bacilliform. Notogastral surface with five pairs of round elevations, ornamented with irregular foveolae. All setae T-shaped. Epimeral seta formula: 3 - 2 - 3 - 4, all except median setae setiform. Nine pairs of genital, two pairs of aggenital, two pairs of anal and three pairs of adanal setae. All legs monodactylous.

MEASUREMENTS: Length of body 418-433 μm, width of body 191-202 μm.

DESCRIPTION: *Prodorsum*: Rostral part narrowing anteriorly. Prodorsal surface with anterolateral thickening, lamellar lines not visible. Median part punctate. Bothridium distinctly protruding, cup-shaped, sensillus comparatively short, bacilliform. Its distal end roughened with a very narrow velum. Posterobothridial condyles triangular, situated close to each other. Their interdistance not longer than distance between lateral ridge. Rostral setae dilated basally (Fig. 7), narrowed anteriorly. Lamellar and interlamellar setae T-shaped, with very long, filiform branches.

Notogaster: Dorsosejugal margin convex, one pair of posterolateral, and one pair of posterior projections present, these and three pairs of elevations on the anteromedian surface well framed and separated from the other surface. All five pairs with round and smooth median field bearing one notogastral seta each. Remaining notogastral surface ornamented with irregular foveolae. Fifteen pairs of notogastral setae present, all T-shaped, size and length of the branches strongly variable. Their surfaces finely roughened.

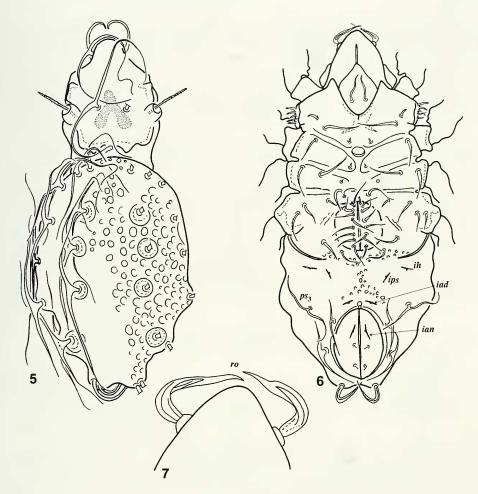
Gnathosoma: Typical for the family (Grandjean 1954). Setae h of the infracapitulum very long, S-shaped.

Ventral parts: Surface of the epimeres punctate. Epimeral setae (except the minute, spiniform 1a and 2a setae) long, setiform, distinctly roughened. Diagastry well visible. Ventral plate typical, as shown by Grandjean (1954), only ornamented with minor foveolae. Genito-anal setal formula: 9 - 2 - 2 - 3; four pairs of lyrifissures (ih, ips, iad and ian) present. Genital setae long, dilated basally. Aggenital setae also long, setiform. Anal setae minute, spiniform, adanal ones T-shaped, much smaller than notogastral setae.

Legs: Well corresponding to Grandjean's drawings and descriptions, not studied in detail.

REMARKS: The new species is close to the type species (*M. mammillaris* Berlese, 1913) of the genus, which was redescribed by Grandjean (1954). It is distinguishing from *M. mammillaris* by the interdistance of the posterobothridial condyles, the shorter sensillus, the absence of the wide epimeral setae (some bacilliform in *M. mammillaris*) and by the dilate genital and setiform, long aggenital setae (very short und minute in *M. mammillaris*).

ETYMOLOGY: Named after my friend Dr Bernd Hauser (Geneva), collector of this very interesting material, for his continuous help in my work on oribatids.



Figs 5-7

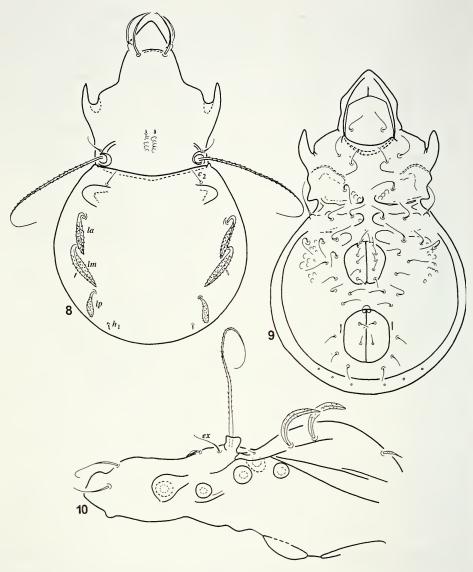
Masthermannia hauseri sp. n. (5) Body in lateral view. (6) Body in ventral view. (7) Rostral setae.

Caveremulus foliaceus sp. n.

Figs 8-10

MATERIAL EXAMINED: Holotype: Madagascar, Prov. Antsiranana; 3.XI.1989; leg. B. Hauser (Mad-89/8); 6 paratypes from the same sample. Holotype and 4 paratypes deposited in MHNG, 2 paratypes (1787-PO-2009) in HNHM.

DIAGNOSIS: Median part of prodorsal surface without costulae. Rostral setae arising from distinct tubercles, between the lamellar setae a weak transcostula present. Interlamellar setae minute, arising near to each other. Some small maculae present behind them. Sensillus very long, setiform. Notogaster with eight pairs of notogastral setae, among them three pairs large, phylliform. Epimeral setal formula 3 - 1 - 3 - 3. Six pairs of genital and two pairs of anal setae. Nine pairs of setae on ventral plate, mostly in preanal position.



Figs 8-10

Caverenulus foliaceus sp. n. (8) Body in dorsal view. (9) Body in ventral view. (10) Anterior part of podosoma in lateral view.

Measurements: Length of body 358-405 μ m, width of body 186-237 μ m.

DESCRIPTION: *Prodorsum*: Rostral apex elongated, conical. Rostral setae arising laterally, from distinct tubercles, lamellar setae situated near to them, their bases connected by a transversal ridge. Both pairs of setae long, setiform. Median part of prodorsum smooth, in its posterior third 5-6 small, indistinct maculae present. In front of

this sculpture a pair of minute interlamellar setae. Exobothridial setae fine, setiform, much longer than interlamellar ones. Bothridium round, a short crest directed inwards from it. Sensillus very long, ciliate, its distal end filiform, curved.

Notogaster: Dorsosejugal suture concave. A pair of characteristic deep hollows present laterally. Setae c_2 short, setiform, arising at the anterior margin of the hollows. Only eight pairs of notogastral setae visible, three of them large, phylliform, covered by small cilia. Setae h_1 very short (or broken), setae p represented only by their alveoli in a posteromarginal position.

Lateral part of podosoma: Rostral part of prodorsum with deep hollow. Bothridium distinctly protruding from the prodorsal surface (Fig. 10). Pedotecta I large, pedotecta II-III absent.

Ventral parts: Apodemes and borders weakly developed. Sternal ones only partly visible, sejugal ones well sclerotised, wide. Posterior border of epimeral region absent. Epimeral surface with irregular polygonal pattern. All epimeral setae long and thin, mostly setiform or filiform. Ventral plate with some round alveoli laterally, remaining surface smooth. Six pairs of genital setae arranged in longitudinal rows, two pairs of anal and three pairs of adanal setae well distinguishable, neotrichy present in aggenital region, consisting of six pairs setae. All setae simple, thin, epimeral setae much longer than the ventral ones.

REMARKS: See remarks after the next species.

ETYMOLOGY: The name refers to the form of the widened notogastral setae.

Caveremulus salicinus sp. n.

Figs 11-13

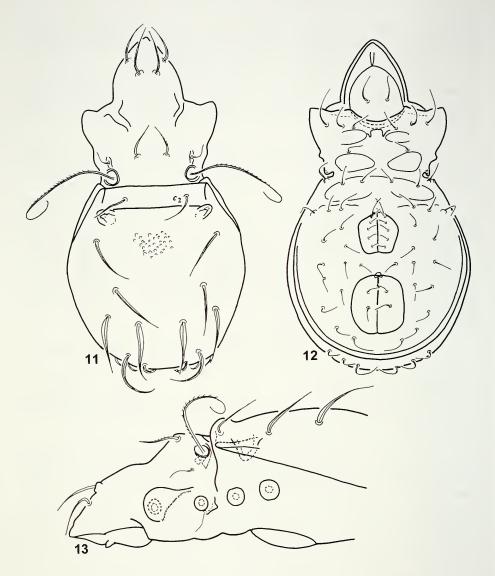
MATERIAL EXAMINED: Holotype: Madagascar, Prov. Antsiranana: 3.XI.1989; leg. B. Hauser (Mad-89/8); 2 paratypes from the same sample. Holotype and 1 paratype deposited in MHNG, 1 paratype (1788-PO-2009) in HNHM.

DIAGNOSIS: Median part of prodorsal surface without costulae. Rostral and lamellar setae arising on small tubercles, lamellar setae located far from each other, between them no transcostula present. Interlamellar setae shorter than the preceding ones, arising also from small, separate tubercles. Sensillus very long, setiform. Notogaster with nine pairs of notogastral setae, six of them much longer than the others, three pairs in the posteromarginal position shortest. All notogastral setae more or less saliciform. Epimeral setal formula 3 - 1 - 3 - 3. Six pairs of genital and two pairs of anal setae. Ten pairs of setae on ventral plate, mostly in a preanal position.

Measurements: Length of body 290-306 μ m, width of body 157-173 μ m.

DESCRIPTION: *Prodorsum*: Rostral apex conical. Anterolateral part of prodorsum with short crest. All prodorsal setae, except exobothridial ones, arising from short tubercles, all setae setiform, finely ciliate. Exobothridial setae arising from short longitudinal crests, originating from anterior margins of bothridia. Interlamellar setae situated far from each other. Sensillus long, setiform, distinctly ciliate, distal part characteristically curved.

Notogaster: Whole surface foveolate. Dorsosejugal suture straight. A pair of characteristic deep hollows present, these laterally connected by a distinct transversal line. Setae c_2 arising far medially from the hollows, short, setiform, much shorter than



Figs 11-13

Caveremlus salicinus sp. n. (11) Body in dorsal view. (12) Body in ventral view. (13) Anterior part of podosoma in lateral view.

setae la. Nine pairs of notogastral setae present, among them five pairs large, narrow, phylliform, resembling Salix leaves. Their surface smooth, a median vein well observable. Setae p much shorter than the others.

Lateral part of podosoma: Pedotectum I large, pedotecta II-III absent.

Ventral parts: Apodemes and borders partly developed, a part of sternal apodemes reduced. Sternal apodemes forming a transversal band, ap. 3 also obser-

vable. Posterior border of epimeral region absent. Epimeral surface smooth. All epimeral setae long and thin, mostly filiform, setae *Ic* longest. Ventral plate smooth. Six pairs of genital setae arranged in longitudinal rows, two pairs of anal and three pairs of adanal setae distinguishable, neotrichy present in aggenital region, consisting of seven pairs of setae. All setae simple, thin, epimeral setae much longer than the ventral ones.

ETYMOLOGY: The new species is named after the form of its notogastral setae.

REMARKS: All species of the genus *Caveremulus* Mahunka, 1985 are known from Madagascar. They are well distinguishable from each other by the following key:

- All notogastral setae equal in length. Adanal setae short, thin, much shorter than the aggenital setae serratus (Mahunka, 1985)
- One pair of phylliform notogastral setae much smaller than the others.

 Adanal and aggenital setae equal in length cordisetus Mahunka, 1983
- Interlamellar setae long, arising far from each other. Notogaster without wide phylliform setae, all setae saliciform salicinus sp. n.

It is necessary to be aware that some Hymenobelba Balogh, 1962 species seem to be closely related to Caveremulus species. A further investigation is desirable.

Tectocepheus velatus velatus (Michael, 1880)

REMARKS: The two studied specimens correspond to the nominate subspecies on the basis of the cuspis of the lamellae and the longitudinal pattern composed of lines in the interbothridial region, although according to Weigmann (2006) the longitudinal lines are characteristic of the subspecies *sarekensis* Trägårdh, 1910. The position of the *iad* lyrifissures is also as in *T. v. velatus*, and so is the body shape. The only difference is the excavate anterior border of the aspis, but this alone does not justify the proposal of a new species or subspecies.

Measurements: Length of body 250-255 μ m, width of body 146-150 μ m.

Ambrobates gen. n.

DIAGNOSIS: Belonging to the family Haplozetidae. Lamellae normal, anterior part of prelamella absent, sublamella present. Tutorium weakly developed. Sensillus short, head round. Pteromorphae large, partly movable. Nine pairs of small, notogastral setal alveoli and one pair of short distinct notogastral setae (p_1) . Four pairs of round sacculi also well visible. Epimeral region without posterior border, sternal apodeme reduced. Epimeral setal formula: 3 - 1 - 3 -3. Three pairs of genital, one pair of aggenital, two pairs of anal and three pairs of adanal setae. All legs monodactylous.

Type species: Ambrobates translamellatus sp. n.

REMARKS: The new genus is well charaterised by the form of the prelamella, the presence of a translamella, the reduced notogastral setae and by the three pairs of genital setae. This combination of features was previously unknown in the family.

Ambrobates translamellatus sp. n.

Figs 14-16

MATERIAL EXAMINED: Holotype: Madagascar, Prov. Antsiranana; 23.XI.1989; leg. B. Hauser (Mad-89/8); 10 paratypes from the same sample. Holotype and 6 paratypes deposited in MHNG, 4 paratypes (1789-PO-2009) in HNHM.

DIAGNOSIS: Rostral apex blunt. Lamellae not reaching the prodorsal margin. Translamella present. Sensillus short, its head round. Epimeral borders and apodemes weakly developed, all epimeral setae minute, simple. Genito-anal setal formula: 3 - 1 - 2 - 3. All legs monodactylous.

Measurements: Length of body 241-295 μ m, width of body 148-182 μ m.

DESCRIPTION: *Prodorsum*: Rostral apex blunt at tip. Lamellae in normal position, narrow, with small rounded apices bearing the lamellar setae. A narrow, but distinctly developed translamella connecting the lamellar apices. Rostral, lamellar and interlamellar setae long. setiform; rostral setae densely pilose, lamellar and interlamellar setae moderately pilose. Sensillus conspicuously short, directed laterad, head round, surface with rounded alveoli.

Notogaster: Dorsosejugal suture distinct. Pteromorpha large, movable, suture (hinge) sometimes hardly visible, especially in the anterior part. Nine pairs of alveoli (vestigial setae), one pair of true setae (p_1) and four pairs of minute, round sacculi present. All four pairs equal in size.

Lateral part of podosoma: Pteromorpha large, rounded. Tutorium very simple. Pedotecta I normal, dorsal margin nearly straight. Exobothridial setae short, fine. Porose area al located very near to sublamella.

Ventral parts: Apodemes and borders weakly developed, sternal apodeme absent or hardly observable. Ap. 2 and ap. sej. not reaching the genital aperture and not connected with each other. Ap. 4 absent. Epimeral surface smooth, only some large foveolae present. All epimeral setae short and fine. Three pairs of simple genital, one pair of aggenital, two pairs of anal, three pairs of adanal setae present. Setae ad₃ in preanal position. Lyrifissures iad located near the anal aperture.

Legs: All legs monodactylous.

REMARKS: See the remarks after the genus description.

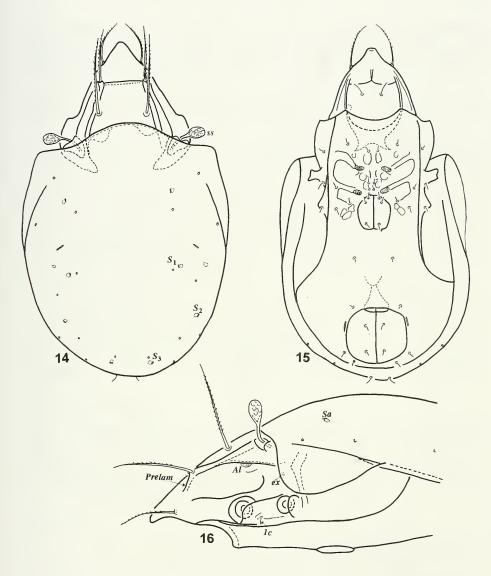
ETYMOLOGY: The name refers to the presence a distinct translamella.

Vilhenabates ambohitra sp. n.

Figs 17-19

MATERIAL EXAMINED: Holotype: Madagascar, Prov. Antsiranana; 23.XI.1989; leg. B. Hauser (Mad-89/8): 10 paratypes from the same sample. Holotype and 6 paratypes deposited in MHNG, 4 paratypes (1790-PO-2008) in HNHM.

DIAGNOSIS: Rostral apex tripartite. Lamellae running laterally, their apices bearing lammellar setae. Sensillus extraordinarily long, directed backwards, head fusiform. Pteromorphae movable, sejugal margin convex, with a pair of porose areas. Notogaster with ten pairs of alveoli and with three pairs of porose areas. Epimeral



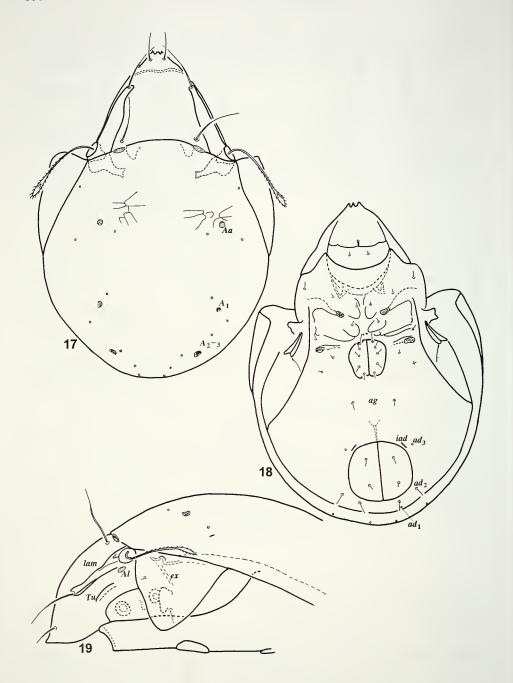
Figs 14-16

Ambrobates translamellatus gen. n., sp. n. (14) Body in dorsal view. (15) Body in ventral view. (16) Anterior part of podosoma in lateral view.

borders and apodemes weakly developed, partly absent. Genito-anal setal formula: 5 - 1 - 2 - 3. All legs monodactylous.

Measurements: Length of body 291-312 μ m, width of body 206-221 μ m.

DESCRIPTION: *Prodorsum*: Rostral part wide, with trifurcate rostral apex. Lamellae long, narrow, slightly dilated distally, directed inwards, lamellar setae located



Figs 17-19

Vilhenabates ambohitra sp. n. (17) Body in dorsal view. (18) Body in ventral view. (19) Anterior part of podosoma in lateral view.

on their apices. Prelamellae absent, sublamellae short, weakly developed. All prodorsal setae comparatively short, finely ciliate. Sensillus very long, directed backwards, with small, lanceolate head, ciliate along the whole length. One pair of very small dorso-sejugal porose areas present basally, near the lamellae.

Notogaster: Dorsosejugal suture well developed, convex. Pteromorphae large, round, tongue-shaped. Three pairs of small, round porose areae well observable. Ten pairs of alveoli of notogastral setae, probably two pairs in posteromarginal position.

Lateral part of podosoma (Fig. 19): Tutorium short, without true apex. Pedotectum 1 long, with straight margin. A small porose area lamellaris (*la*) visible. Circumpedal carina long, reaching lateral margin of ventral plate.

Ventral parts: Apodemes and borders weakly developed. Bo. 2 and bo. sej. reaching the genital aperture and connected with each other. Epimeral surface smooth, without pattern. All epimeral setae short, not ciliate. Bo. 4 absent. Five pairs of simple genital, one pair of aggenital, two pairs of anal and three pairs of short adanal setae present. Setae ad_3 and lyrifissures iad in preanal position, both located very near to the anterior corner of the anal aperture.

 $\it Legs$: All legs monodactylous. Femora of leg II-IV with distinct blade-like shape basally.

REMARKS: The new species is well distinguishable from the previously known *Vilhenabates* species by the shape of the rostral apex.

ETYMOLOGY: Named after the type locality of this species on Madagascar, the Parc National Montagne d'Ambre (= Ambohitra).

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